

ABSTRACT

X-ray radiation is transmitted through and scattered from an object under inspection

5 to detect weapons, narcotics, explosives or other contraband. Relatively fast scintillators are employed for faster X-ray detection efficiency and significantly improved image resolution. Detector design is improved by the use of optically adiabatic scintillators. Switching between photon-counting and photon integration modes reduces noise and significantly increases overall image quality.